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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DEL SOLE, JOSEPH S

ART UNIT PAPER NUMBER

1722

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/030,880	Applicant(s) MAGGIO ET AL.	
	Examiner Joseph S. Del Sole	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 25 is/are rejected.
- 7) ☒ Claim(s) 14-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: **a)** page 9, line 10 states "leaving the slot (5) to deviate", however reference numeral 5 refers to the assembly and not the slot, therefore correction is needed.

Appropriate correction is required.

2. The disclosure is objected to because the quality of the text is poor and many words are illegible, examples of errors include, but are not limited to: **a)** at page 5, line 36 "associated" is illegible; and **b)** at page 10, line 36 "lower" is illegible. The Applicant must correct the multitude of errors created by an apparent poor photocopying of the disclosure by replacing each of the paragraphs in the disclosure containing an error or replacing the entire disclosure. If the Applicant chooses to submit a substitute specification, the Applicant must be sure to follow 37 CFR 1.125. This includes, but is not limited to, **a)** submitting a statement that the substitute specification includes no new matter; **b)** submitting a marked up version of the substitute specification showing all the changes (including the matter being added to and the matter being deleted from) to the specification of record; and **c)** submitting the substitute specification in clean form without markings as to amended material.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geus et al (5,800,840) in view of Trimble et al (5,397,413).

Geus et al ('840) teach a machine for making a nonwoven web having a drawing assembly (Fig 1, #2) for drawing filaments which pass therethrough with air; a diffuser (Fig 1, #3) having an inlet zone formed by a convergent nozzle (Fig

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2, the portion of #3 above #28) and a divergent nozzle (Fig 2, the portion of #3 below #28) connected to the convergent nozzle for opening drawn filaments which pass therethrough into opened filaments; and a receiving belt (Fig 1, #4) for receiving the filaments.

Geus et al ('840) fail to teach a rail for electrostatically charging the opened filament to form charged filaments.

Trimble et al teach a rail (Fig 2, #18) for electrostatically charging filaments before they are deposited on the receiving belt for the purpose of causing the filaments to repel one another, separate and spread apart such that they are randomly deposited on a belt (col 5, lines 27-37).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Geus et al ('840) with a rail as taught by Trimble et al because it enables a random deposition of filaments on the belt.

The Examiner notes that the limitation "said convergent and divergent nozzles slowing the passing filaments to enhance spreading of the filaments by the electrostatically charging and thereby cooperatively obtaining an improved spreading of the filaments and a reduced rebound phenomena of filaments on said receiving belt" is a process limitation that does not structurally further limit the apparatus beyond that which is in claim 25 elsewhere; the limitation merely serves to describe the process resulting from the structure claimed.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Balk (4,820,142) in view of Trimble et al (5,397,413).

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Balk teaches a machine for making a nonwoven web having a drawing assembly (Fig 1, #4) for drawing filaments which pass therethrough with air; a diffuser (Fig 1, #6) having an inlet zone formed by a convergent nozzle (Fig 1, #15, the flaps converge to form the nozzle) and a divergent nozzle (Fig 1, #s 18 and 19, portion #19 is divergent and flaps #18 are adjustable to be divergent, col 3, lines 25-28 and col 3, lines 44-50; also the portion of #6 just below reference numeral 5 in Figure 1 is divergent) connected to the convergent nozzle for opening drawn filaments which pass therethrough into opened filaments; and a receiving belt (Fig 1, #7) for receiving the filaments.

Balk fails to teach a rail for electrostatically charging the opened filament to form charged filaments.

Trimble et al teach a rail (Fig 2, #18) for electrostatically charging filaments before they are deposited on the receiving belt for the purpose of causing the filaments to repel one another, separate and spread apart such that they are randomly deposited on a belt (col 5, lines 27-37).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Balk with a rail as taught by Trimble et al because it enables a random deposition of filaments on the belt.

The Examiner notes that the limitation "said convergent and divergent nozzles slowing the passing filaments to enhance spreading of the filaments by the electrostatically charging and thereby cooperatively obtaining an improved spreading of the filaments and a reduced rebound phenomena of filaments on

said receiving belt" is a process limitation that does not structurally further limit the apparatus beyond that which is in claim 25 elsewhere; the limitation merely serves to describe the process resulting from the structure claimed.

8. Claims 12-13 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geus et al (5,460,500) in view of Trimble et al (5,397,413).

Geus et al ('500) teach a machine for making a nonwoven web having a drawing assembly (Fig 1, #4) for drawing filaments which pass therethrough with air; a diffuser (Fig 1, #5) having an inlet zone formed by a convergent nozzle (Fig 1, the top half of #5) and a divergent nozzle (Fig 1, the bottom half of #5) connected to the convergent nozzle for opening drawn filaments which pass therethrough into opened filaments; and a receiving belt (Fig 1, #6) for receiving the filaments; wherein a slot (Fig 1, #12) is formed between the drawing assembly and the diffuser for deliver of a flow of air onto the filaments, the slot opening to ambient air for intake of air by a venturi effect produced in the divergent nozzle by air passing therethrough with the drawn filaments (col 4, line 62 - col 5, line 1); and the drawing assembly includes a drawing slot outlet from which the drawn filaments are emitted (Fig 1), the drawn filaments being received in the diffuser inlet zone (Fig 1), and the slot delivers the flow of air at the drawing slot outlet (Fig 1).

Geus et al ('500) fail to teach a rail for electrostatically charging the opened filament to form charged filaments.

Trimble et al teach a rail (Fig 2, #18) for electrostatically charging filaments before they are deposited on the receiving belt for the purpose of

causing the filaments to repel one another, separate and spread apart such that they are randomly deposited on a belt (col 5, lines 27-37).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Geus et al ('500) with a rail as taught by Trimble et al because it enables a random deposition of filaments on the belt.

The Examiner notes that the limitations "said convergent and divergent nozzles slowing the passing filaments to enhance spreading of the filaments by the electrostatically charging and thereby cooperatively obtaining an improved spreading of the filaments and a reduced rebound phenomena of filaments on said receiving belt" and "to reduce the air speed and the speed of the passing filaments" are process limitations that do not structurally further limit the apparatus beyond that which is elsewhere in claims 12, 13 and 25; the limitations merely serve to describe the processes resulting from the structure claimed.

Allowable Subject Matter

9. Claims 14-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or suggest a machine with a drawing assembly, diffuser, electrostatically charging rail and receiving belt and further having a) a slot extending through the diffuser and opening into the

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divergent nozzle for injection therein of air by venturi effect; **b)** the electrostatically charging rail located upstream from the divergent nozzle.

Response to Arguments

11. Applicant's arguments filed 7/2/04 have been fully considered but they are not persuasive. Certain arguments with respect to claims 12-25 have been considered but are moot in view of the new grounds of rejection, which have been necessitated by amendment.

The Applicant argues that Balk does not have a diffuser with the form including a convergent nozzle and a divergent nozzle.

The Examiner disagrees. As stated previously and above, Balk includes a diffuser (Fig 1, #6) that first converges then diverges (see Fig 1, the boundary between convergence and divergence is demonstrated where reference numeral 5 is placed). The flaps also create additional convergence and divergence.

The Applicant argues that there is no suggestion that the diffuser and the electrostatic rail be used together.

The Examiner disagrees. Balk, Geus et al (5,800,840) and Geus et al (5,460,500) teach a diffuser for deposited the non-woven filaments, however it is obvious to add the electrostatic rail of Trimble et al after the diffuser because the rail enables the filaments to repel from one another and randomly become deposited in a uniform manner (col 3, lines 35-41 and col 5, lines 27-37).

The Applicant argues that Geus et al (5,800,840) provides satisfactory opening of the filaments and that Trimble teaches that electrostatically charging sufficiently spreads the filaments.

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While this is true, Trimble also teaches the use of the electrostatic rail for charging the filaments so that they repel one another, thus improving Geus et al (5,800,840). While the diffuser of Geus et al spreads apart filaments, some filaments may remain near one another and the charge produced by Trimble would serve to further separate such filaments by a repelling action.

The Applicant argues that the additional features (those added by the new claims) are not shown alone and/or in the claimed diffuser and electrostatic charging system by the prior art.

While this may be true, the argument is moot in view of the new grounds of rejection, necessitated by amendment.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

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the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).



J.S.D.
August 13, 2004